I. Introduction

In an effort to prospectively monitor the emergence of antimicrobial resistance in zoonotic pathogens, the National Antimicrobial Resistance Monitoring System (NARMS) was established in 1996 by the Food and Drug Administration's Center for Veterinary Medicine in collaboration with the Centers for Disease Control and Prevention, and the United States Department of Agriculture (USDA).

The animal component of NARMS is housed within the Bacterial Epidemiology and Antimicrobial Resistance Research Unit (BEAR) of the USDA's Agricultural Research Service in Athens, Georgia. The animal component of NARMS comprises the testing of isolates obtained from diagnostic animal specimens, healthy on-farm animals, and food-producing animals at slaughter. The majority of isolates originate from the USDA Food Safety and Inspection Service (FSIS) and USDA Animal and Plant Health Inspection Service programs in addition to internal, collaborator and veterinary diagnostic laboratory studies.

The antimicrobial agents selected for study are representative of common antimicrobials used in both human and veterinary medicine and are selected primarily based on therapeutic value, although molecular mechanisms of resistance or treatment patterns may also influence selection. Non-Typhi *Salmonella* was chosen as a sentinel organism of the NARMS program. Testing of *Campylobacter* isolates from animals began in 1998 while *Escherichia coli* was included in 2000.

This report summarizes 2007 data for *Salmonella*, *Campylobacter*, and *E. coli* isolates from food-producing animals at slaughter (chicken, turkey, cattle, and swine). Samples are obtained through USDA's FSIS Pathogen Reduction: Hazard Analysis and Critical Control Point verification testing program. Resistance trends are included; however, due to the amount of data and complexity of analyses involved, all permutations are not represented. Additional information on the animal component of NARMS including past annual reports, summary trend tables and graphs, as well as a new component for interactive data analysis can be found on the USDA's NARMS web page. Other analysis of a specific nature is available upon request.

The 2006 NARMS Executive Report contains additional background information on sampling and testing methodology for the human and retail arms of NARMS as well as summary data from all three components.